

Engineering has reviewed the plans for the Ogden Market Place project submitted August 3, 2016 and have the following comments:

#### **Stormwater Management Permit Application Form**

1. IV. Project Information; Line Item #14: It is not a requirement that the permanent pool surface area of the pond be included as impervious area. This impervious allotment can be allocated as "future development" in the table and the design will remain as is or you can remove this allotment from your calculations and reduce the size of your pond. Depending on your decision, the table on sheet C-2.1 will also need to be updated.

#### **Hydrology Study**

2. Can the 10-year be printed at a legible scale for the Hydrology Study? I generally like to have all calculations in a calculation package and not divided between the plans and calculations packet.
3. Please include the analysis of the 50-year storm event for the pipe systems in the Hydrology Study and at a legible scale. The system is sized for the 10-year, but the 50-year storm is also analyzed for flooding.
4. Please make sure the systems for both the 10 and the 50 year events have an appropriate tailwater condition. The HGL cannot be adequately determined if the tailwater condition is set at the permanent pool elevation. At a minimum, the temporary pool elevation should be used.
5. Please provide the buoyancy calculations for the two outlet structures.
6. Please add to the Hydrology Study the actual Hydrograph print out for the 50-year run where the principle spillway is obstructed.

#### **Plans**

7. Sheet C-2; Structure A-4MH: Check the IE IN from A-4.1JB (30.29') and the IE OUT: 30.44'.
8. Sheet C-4.2: Check note #19...slopes should not exceed 3:1 unless specifically approved by soils engineer. 2:1 tends to be too steep a slope for soils in this region unless the soils engineer approves otherwise. Slopes around the interior of the pond above the permanent pool and the pond embankment slopes around the exterior of the pond must be 3:1 or flatter.
9. Sheet C-5.1: There appears to be a structure missing in the A1 profile view (A-8 G.I.).

Please resubmit one complete set of revised plans, calculations and supporting documentation to Engineering for additional review. Please call or email if there are any questions.